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10/764,958

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Roy E. Marsden

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EXAMINER

PARKER, BRANDI P

ART UNIT

PAPER NUMBER

3624

NOTIFICATION DATE

DELIVERY MODE

09/17/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/764,958

**Applicant(s)**

MARSTEN, ROY E.

**Examiner**

BRANDI P. PARKER

**Art Unit**

3624

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2, 3, 6-22 and 24-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-3, 6-22, 24-26 and 27-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/3/2009 has been entered.

### ***Acknowledgements***

2. This is a non-final office action in response to the Applicant's Request for Continued Examination filed on 6/3/2009. Claims 2-3, 6-22 and 24-32 are pending in this Office Action. Claims 2-3, 6-22 and 24-26 are amended. Claims 1, 4-5 and 23 are cancelled. Claims 27-32 are newly added.

### ***Response to Applicant's Arguments***

3. In response to Applicant's arguments that Kapadia teaches away from optimizing all options and features associated with a product configuration or group of product configurations before offering a configuration to a consumer, location on pages 17-19 of Applicant's remarks, examiner respectfully disagree. Kapadia teaches specific examples of the various embodiments of its optimization system. Kapadia teaches a

configuration engine that restricts the selections made by the user to a set defined in advance by the manufacturer (column/line 3/49-58). Kapadia specifically teaches a default or optimal configuration that is presented to the user in the ATP engine where the best configuration is selected from all available product components, instead of the configuration engine that is lead by the consumer (column/line 8/58-9/3). In another example of the use of Kapadia's optimization system, Kapadia discloses a second optimization that may be carried out where the user does not select the default or optimal configuration and there is not a calculation of all possible item combinations (column/line 9/15-60). Thus, the disclosure of Kapadia that Applicant referenced is inapplicable to the optimization process and selection of a default or optimal configuration that is presented to the user, and is implemented only when the user does not select the default configuration. Thus, Kapadia does teach and suggest optimizing all options and features associated with a product configuration or group of product configurations before offering a configuration to a consumer.

4. Applicant's arguments with respect to amended claims 2-3, 6-22 and 24-32 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

5. Claims 2-3, 6-22 and 25-26 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3, 6-14, 20-22, 24-26 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et al (US 7039602) in view of Mike Thurber, "Open Road to Strategic Value", Intelligent Enterprise, June 1, 1999 article and Schierholt (US 2005/0149377).

8. Regarding to claims 24 and 27-32, Kapadia teaches a computerized system for identifying an optimum set of product configurations comprising:

a. a configuration generator for receiving product configuration data, the product configuration data representative of all possible product configurations,

each product configuration defined by a plurality of features, (column/line 3/49-67, regarding configuration engine),

b. the configuration generator applying mix-and-match rule to identify a subset of valid product configurations (column/line 5/8-12, 8/58-9/3, regarding rules to determine a complete default selection);

c. a cost calculator for calculating and associating a cost of manufacture for each of the valid product configurations (column/line 6/56-7/2, 7/13-30, regarding the minimization of the overall cost of the product)

d. a revenue calculator for calculating and associating a revenue potential for each of the valid product configurations (column/line 7/38-44 selecting the default configuration that maximizes profit);

e. an objective-based modeler for defining an optimization model and for receiving product configuration information from the configuration generator, the demand simulator, the cost calculator, and the revenue calculator (column/line 6/56-7/2, 7/13-30, regarding the optimization function for default selection that minimizes costs and maximizes profit); and

f. an optimization engine for solving the optimization model based on the received product configuration information and generating the optimum subset of

valid product configurations from the set of valid production configurations in the valid product configuration space, and for generating costs, revenue, and parts needed for the optimum subset of valid product configurations (column/line 6/56-7/2, 7/13-30 regarding the optimization function for default selection that minimizes costs and maximizes profit).

Kapadia does not explicitly teach incorporating demand for the valid product configurations. However, Schierholt teaches:

g. a demand simulator for receiving historical demand associated with product configurations and calculating relative demand for each of the valid product configurations (paragraph 0008, 0010, 0013);

It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Kapadia with the methods in Schierholt to improve the optimization process to increase profit and since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Schierholt does not explicitly teach historical demand for all possible product configurations. However, Thurber teaches:

- h. a demand simulator for receiving historical demand associated with product configurations (pg. 3 paragraph 4 and 5, regarding historical records of all vehicle sales, including model, price and specific equipment options)
- i. a configuration generator for receiving product configuration data, the product configuration data representative of all possible product configurations, each product configuration defined by a plurality of features, the configuration generator applying mix-and-match rule to identify a subset of valid product configurations (pg. 3, paragraph 6, regarding selecting a subset of the equipment options that are more critical)

It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Kapadia and Schierholt to teach historical demand for all possible product configurations as taught by Thuber since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Examiner takes official notice displaying valid product configurations as an ordered array or a dimensional space is old and well known and commonly found in product tables or bill of materials (BOM). Therefore, it would have been obvious to one with ordinary skill in the art to display the default configuration in the form of an ordered array, table or bill of materials.



9. As to claim 2, Kapadia further teaches associating a cost and a revenue to each valid product configuration (column/line (column/line 6/56-7/2, 7/13-30, regarding the minimization of the overall cost of the product; column/line 7/38-44, regarding selecting the default configuration that maximizes profit).

10. Regarding claim 3, Kapadia further teaches wherein the cost associated with each valid product configuration is comprised of a plurality of per option costs (column/line 8/45-57, regarding minimizing the retail price of orderable items).

11. Regarding claim 6, Kapadia further teaches wherein the desired objective is to maximize the profit of a manufacturer or retailer of the product (column/line 7/38-44, regarding selecting the default configuration that maximizes profit).

12. With respect to claim 7, Kapadia further teaches wherein the desired objective is to minimize the costs of a manufacturer of the product (column/line 6/56-7/2, 7/13-30, regarding the minimization of the overall cost of the product)

13. As to claim 8, Kapadia does not explicitly teach having an objective to maximize coverage of customer demand. However, Schierholt teaches wherein the desired objective is to maximize coverage of customer demand for the product (paragraph 0013). It would have been obvious to one with ordinary skill in the art to combine the

method disclosed in Kapadia with the methods in Schierholt by including demand in the analysis to improve the optimization process to increase profit.

14. Regarding claims 9 and 10, Kapadia teaches wherein the optimization model is defined such that the number of product configurations in the optimum set of product configurations is fixed or variable. (column/line 6/56-7/2, 7/13-30, regarding default configurations)

15. As to claim 11, Kapadia further teaches wherein the dimensions of the ordered sets represent the selectable features in a fixed and non-modifiable order (column/line 5/8-18, regarding default configurations).

16. Regarding claim 12, Kapadia further teaches wherein the step of identifying the valid product configurations comprises the steps of applying mix-and-match rules to identify invalid or impermissible product configurations (column/line 6/11-23, regarding the default selection is modified based on engine type).

17. With respect to claim 13, Kapadia teaches the method of claim 12. Examiner notes that it is old and well known in the art to use fast enumeration algorithms to iterate through the contents of all possible configurations and list the partial configurations separately. Applicant failed to challenge the fact that the concept of fast enumeration is old and well known, therefore it is not admitted prior art.

18. As to claim 14, Kapadia further teaches the method of claim 1 wherein the step of defining configuration neighborhoods comprises the step of defining a relation structure (column/line 8/30-38, regarding relationships of items).

19. As to claim 20, Kapadia further teaches wherein the relation structure identifies at least one valid product configuration that captures another valid product configuration through an upgrade, conversion, or acceptance of at least one option (column/line 8/22-29).

20. With respect to claims 21 and 22, whether or not the product is a manufactured good or service does not affect the function of the method to limit the scope of the claim. Therefore, claims 21 and 22 consist of non functional descriptive material.

21. As to claim 25, Kapadia further teaches wherein the generated optimum subset of valid product configurations comprises the product configurations that a manufacturer should manufacture to meet the desired objective (column/line 14/65 - 15/10).

22. Regarding claim 26, Kapadia further teaches wherein the generated optimum subset of valid product configurations comprises the product configurations that a retailer should offer for sale to customers to meet the desired objective (column/line 14/65 - 15/10).

23. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et al (US 7039602) in view of Mike Thurber, "Open Road to Strategic Value", Intelligent Enterprise, June 1, 1999 article and Schierholt (US 2005/0149377) as applied to claims 2-3 and 6-14 above, in further view of Balasinski (US 7231374).

Regarding to claim 15, Kapadia in view of Schierhold and Thurber teaches the method of claim 14. Kapadia does not explicitly teach having options that are upgradeable. However, Balasinski teaches an upgrade relation that identifies at least one feature having an option that is upgradeable (column/line 6/23-29). Having the upgrade being at no additional cost to a customer consist of non functional descriptive material that does not limit the scope of the claim. It would have been obvious to one with ordinary skill in the art to combine Kapadia with Balasinski to increase a manufacturer's product exposure by offering available products that are compatible with the product that the customer wishes to purchase since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

24. With respect to claim 16, Kapadia in view of Schierhold and Thurber does not explicitly teach features having options that are convertible at a conversion cost. However, Balasinski teaches the method of claim 14 wherein the relation structure is a

convert relation that identifies at least one feature having an option that is convertible to another option at a respective conversion cost (Figure 2, column/line 2/2-28, 44-61, 7/61-67).

25. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et al (US 7039602) in view of Mike Thurber, "Open Road to Strategic Value", Intelligent Enterprise, June 1, 1999 article and Schierholt (US 2005/0149377) as applied to claims 2-3 and 6-14 above, in further view of Walker et al (US 7347364)

26. As to claim 17 and 19, Kapadia teaches having a relation structure (column/line 8/30-38, regarding relationships of items). Kapadia does not explicitly teach having an option at an acceptance value or probability customer will accept the option. However, Walker teaches identifying at least one feature having an option that is acceptable to a consumer desiring a different option at a respective acceptance value (column/line 4/46-67, regarding "expected value" of alternative option). It would have been obvious to one having ordinary skill in the art to combine to Kapadia with Walker to select the best options to present to the customer to improve the changes that the customer will select the option and since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

27. Regarding claim 18, Kapadia does not explicitly teach having an acceptance value that is a probability that the customer will accept the option. However, Walker teaches wherein the acceptance value is a probability that the customer will accept the acceptance option instead of the different option (column/line 4/46-67). It would have been obvious to one having ordinary skill in the art to combine to Kapadia with Walker to select the best options to present to the customer to improve the changes that the customer will select the option and since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

### ***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brunner et al, (US 7386832, regarding product configuration structure).

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDI P. PARKER whose telephone number is (571) 272-9796. The examiner can normally be reached on Mon-Thurs. 8-5pm.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley B. Bayat can be reached on (571) 272-6704. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRANDI P PARKER/  
Examiner, Art Unit 3624

/Bradley B Bayat/  
Supervisory Patent Examiner, Art Unit 3624